

RoHS Compliant Product

A suffix of "-C" specifies halogen-free and lead-free

FEATURES

- Optimized for LAN Protection Applications
- Bi-directional Types
- Low Incremental Surge Resistance
- Excellent Clamping Capability
- Low Profile Package With Built-in Strain Relief for SMT Applications
- 200W Peak Pulse Power Capability with Very Fast Response Time
- High Temperature Soldering Guaranteed: 260°C/10s at Terminals

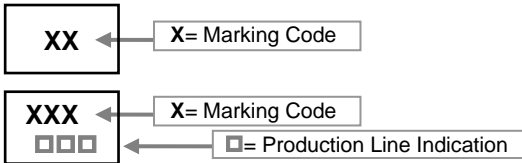
SOD-123FL



MECHANICAL DATA

- Case: SOD-123FL Molded Plastic
- Molding compound: UL Flammability Classification Rating 94V-0
- Terminals: Solder Plated; Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

MARKING



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123FL	10K	13 inch

ORDER INFORMATION

Part Number	Type
S2FL5.0CA-C~S2FL188CA-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, de-rate current by 20%.)

Ratings	Symbol	Value	Units
Peak Power Dissipation @ 10/1000µs waveform ¹	P _{PP}	200	W
Peak Pulse Current @ 10/1000µs waveform ¹	I _{PP}	See Next Table.	A
Thermal Resistance from Junction-Ambient	V _F	180	°C/W
Operating Junction & Storage Temperature Range	T _J , T _{STG}	-55~150	°C

Note:

1. Non-repetitive current pulse and de-rated above T_A=25°C.

ELECTRICAL CHARACTERISTICS (Rating $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Part Number	Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Maximum Clamping Voltage V_C @ I_{PP}	Peak Pulse Current	Reverse Leakage I_R @ V_{RWM}
		Min.	Max.				
Directional	V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Bi	V	V	V	mA	V	A	μA
S2FL5.0CA-C	5	6.4	7	10	9.2	21.7	400
S2FL6.0CA-C	6	6.7	7.4	10	10.3	19.4	400
S2FL6.5CA-C	6.5	7.2	8	10	11.2	17.9	250
S2FL7.0CA-C	7	7.8	8.6	10	12	16.7	100
S2FL7.5CA-C	7.5	8.3	9.2	1	12.9	15.5	50
S2FL8.0CA-C	8	8.9	9.8	1	13.6	14.71	25
S2FL8.5CA-C	8.5	9.4	10.4	1	14.4	13.9	10
S2FL9.0CA-C	9	10	11.1	1	15.4	13	5
S2FL10CA-C	10	11.1	12.3	1	17	11.8	2.5
S2FL11CA-C	11	12.2	13.5	1	18.2	11	2.5
S2FL12CA-C	12	13.3	14.7	1	19.9	10.1	2.5
S2FL13CA-C	13	14.4	15.9	1	21.5	9.3	1
S2FL14CA-C	14	15.6	17.2	1	23.2	8.6	1
S2FL15CA-C	15	16.7	18.5	1	24.4	8.2	1
S2FL16CA-C	16	17.8	19.7	1	26	7.7	1
S2FL17CA-C	17	18.9	20.9	1	27.6	7.2	1
S2FL18CA-C	18	20	22.1	1	29.2	6.8	1
S2FL20CA-C	20	22.2	24.5	1	32.4	6.2	1
S2FL22CA-C	22	24.4	26.9	1	35.5	5.6	1
S2FL24CA-C	24	26.7	29.5	1	38.9	5.1	1
S2FL26CA-C	26	28.9	31.9	1	42.1	4.75	1
S2FL28CA-C	28	31.1	34.4	1	45.4	4.4	1
S2FL30CA-C	30	33.3	36.8	1	48.4	4.1	1
S2FL33CA-C	33	36.7	40.6	1	53.3	3.8	1
S2FL36CA-C	36	40	44.2	1	58.1	3.4	1
S2FL40CA-C	40	44.4	49.1	1	64.5	3.1	1
S2FL43CA-C	43	47.8	52.8	1	69.4	2.9	1
S2FL45CA-C	45	50	55.3	1	72.7	2.8	1

ELECTRICAL CHARACTERISTICS (Rating $T_A=25^\circ\text{C}$ unless otherwise specified)

Part Number	Reverse Stand-Off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Maximum Clamping Voltage V_C @ I_{PP}	Peak Pulse Current	Reverse Leakage I_R @ V_{RWM}
		Min.	Max.				
Directional	V_{RWM}	V_{BR}		I_T	V_C	I_{PP}	I_R
Bi	V	V	V	mA	V	A	μA
S2FL48CA-C	48	53.3	58.9	1	77.4	2.6	1
S2FL51CA-C	51	56.7	62.7	1	82.4	2.4	1
S2FL54CA-C	54	60	66.3	1	87.1	2.3	1
S2FL58CA-C	58	64	71.2	1	93.6	2.1	1
S2FL60CA-C	60	66.7	73.7	1	96.8	2.1	1
S2FL64CA-C	64	71.1	78.6	1	103	1.9	1
S2FL70CA-C	70	78.8	86	1	113	1.8	1
S2FL75CA-C	75	83.3	92.1	1	121	1.7	1
S2FL78CA-C	78	86.7	95.8	1	126	1.6	1
S2FL85CA-C	85	94.4	104	1	137	1.5	1
S2FL90CA-C	90	100	111	1	146	1.4	1
S2FL100CA-C	100	111	123	1	162	1.2	1
S2FL110CA-C	110	122	135	1	177	1.1	1
S2FL120CA-C	120	133	147	1	193	1	1
S2FL130CA-C	130	144	159	1	209	1	1
S2FL150CA-C	150	167	185	1	243	0.8	1
S2FL160CA-C	160	178	197	1	259	0.8	1
S2FL170CA-C	170	189	209	1	275	0.7	1
S2FL188CA-C	188	209	231	1	302	0.6	1

RATINGS AND CHARACTERISTIC CURVES

FIG.1 -- PEAK PULSE POWER RATING CURVE

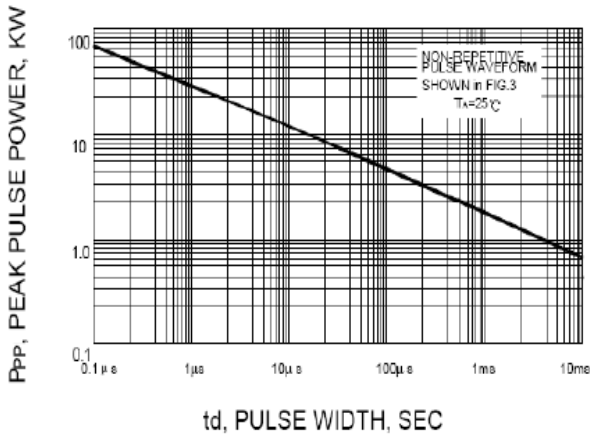


FIG.2 -- PULSE DERATING CURVE

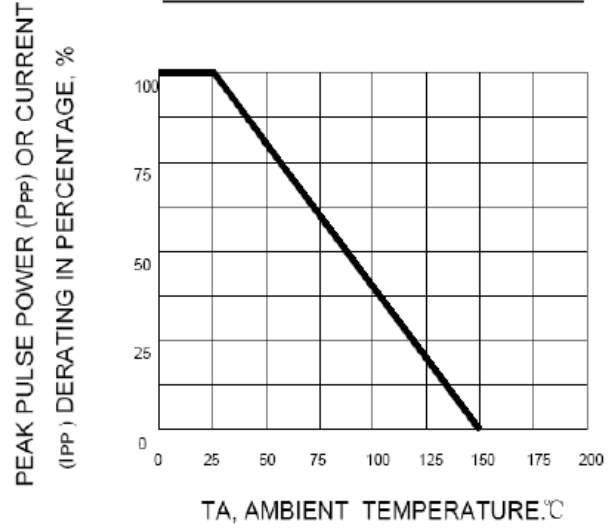
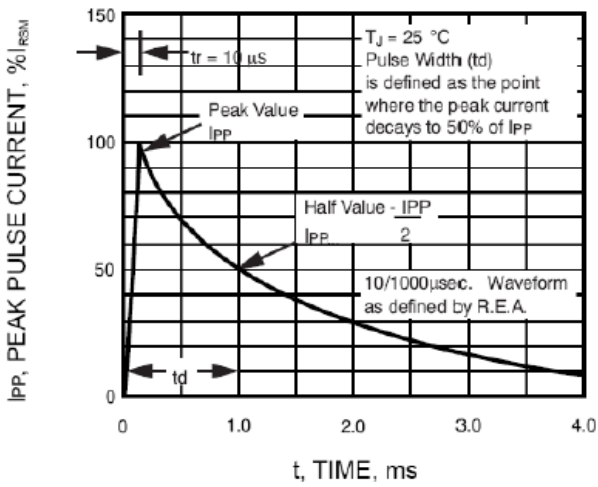
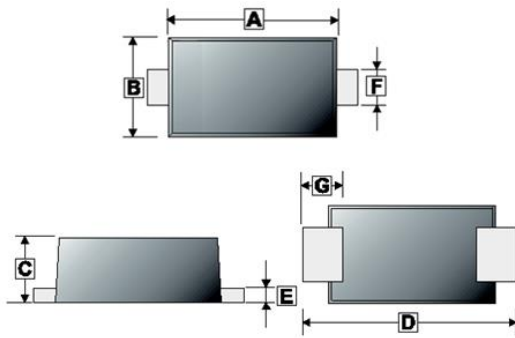


FIG.3 -- PULSE WAVEFORM



PACKAGE OUTLINE DIMENSIONS

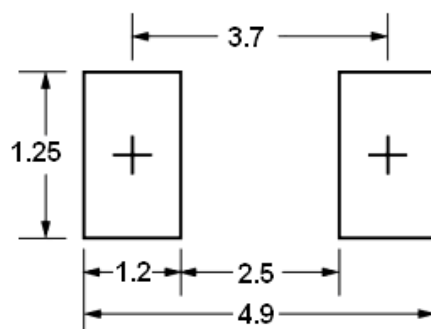
SOD-123FL



REF.	Millimeter	
	Min.	Max.
A	2.40	3.10
B	1.40	2.10
C	0.80	1.55
D	3.30	3.95
E	0.05	0.30
F	0.50	1.35
G	0.80 TYP.	

MOUNTING PAD LAYOUT

SOD-123FL



*Dimensions in millimeters